Remarks

Claims 1-11 remain in the application. Independent claims 1, 6, and 9 have been amended to particularly distinguish the present invention from teachings of references relied upon by the Examiner and other references of record. All of the claims are now considered allowable as discussed in greater detail below.

The Examiner rejected all claims under 35 U.S.C. § 103(a) as unpatentable over *Brocard et al.* in view of *Malecki et al.* The Examiner argued that *Brocard et al.* discloses a method for controlling a vehicle engine including an electronic control module and a throttle control (master lever) by limiting response to throttle actuation determined to be undesirable. In addition, the Examiner argued that *Brocard et al.* discloses sensing when the engine is in overspeed operation and responding to sensing the overspeed operation by inhibiting response to throttle control actuation. However, the teachings of *Brocard et al.* pertain to test features that apply to a control system for a jet engine, and fail to anticipate or suggest that such features may apply to controls for a compression ignition vehicle engine with ordinary skill in the art of compression ignition engines.

In general, *Brocard et al.* discloses a fuel control unit for an aircraft jet engine and, more particularly, how such a system can be tested during each landing to assure overspeed limitation and cutoff systems for the turbo jet engine will work when needed. The relevance of these testing features to a compression ignition internal combustion engine control is not understood. In particular, cutoff on stop and cutoff on overspeed features are part of the aircraft control system that would be uncommon to vehicle drivetrains powered by internal combustion compression ignition engines.

These generally recognized differences are now made express by amending claim 1 to include express reference to compression ignition engines to distinguish it from the turbo jet engine technology of *Brocard et al.* Similar limitations were previously recited in independent claims 6 and 9 and therefore need not be added.

Moreover, the Examiner's attempt to read the teachings of the turbo jet engine technology of *Brocard et al.* on the claim limitations represents a distortion of the teachings of the reference. For example, the Examiner's reference to throttle control as being the master lever is an attempt to equate two substantially different control actuators. An aircraft pilot engine stop handle (called the master lever) plays a different role in vehicle propulsion than the throttle actuator for an internal combustion vehicle engine coupled to a mechanical drivetrain, ground vehicle. The Examiner's arguments gloss over these substantial differences, and do not represent ordinary skill in the art of engine control systems or proper grounds for rejection of the claimed invention under 35 U.S.C. § 103.

Moreover, while *Malecki et al.* describes an engine overspeed sensing and readout system for ground vehicle systems of a more related type, the *Malecki et al.* system avoids reaching excessive motor speed that may occur when an operator is about to engage the drivetrain in a downshift by sensing speed indicia occurring in the transmission of the vehicle before the downshift is implemented. *Malecki et al.'s* reference to engine braking refers to the additional engine braking caused by downshift to a lower gear ratio whereby the engine speed increases as the vehicle continues traveling as the drivetrain is shifted to a lower gear for gradual deceleration. This engine speed increase causes an increase in engine friction, which will slow down the vehicle. As expressly referred to in *Malecki et al.*, this is the type of braking one is able to do in an automobile equipped with a manual transmission by engaging a lower gear as the operator is preparing to decelerate or stop. *See, column 5, lines 3-5*. Such a feature is substantially different from engine compression braking as now particularly defined in the claim.

Engine compression brakes open cylinder exhaust valves near the top of the normal compression stroke, releasing the compressed cylinder charge to the exhaust passage. The blowdown of compressed air to atmospheric pressure prevents the return of energy to the engine piston on the expansion stroke. The effect is a net energy loss since the work done in compressing the cylinder charge is not returned during the expansion stroke. Such brakes allow for faster vehicle downhill descent. Of course, downshifting braking as taught by

Malecki et al. slows downhill descents, and represents a substantial departure from the engine compression braking referred to in the present application.

Each of the independent claims has been amended to include express reference to engine compression braking as the engine braking previously recited in the claim as enabled in response to the control system. As a result, the claims now particularly and patentably define the present invention over the teachings of *Malecki et al.*, *Brocard et al.*, and their combination.

The amendments are fully supported by the original disclosure and do not add new matter to the application. For example, reference to the previously claimed engine braking as engine compression braking is referred to at page 8, line 29 - page 9, line 2. Accordingly, the claim amendments are fully supported and proper for entry in the present application, and do not add new matter.

The Examiner's argument that it would have been obvious to one of ordinary skill in the art to combine the turbo jet testing system of *Brocard et al.* by combining the drivetrain sensing system of the ground vehicle's transmission speed is not an application of ordinary skill in the art of either technology. There is no motivation to control a turbo jet engine in response to a ground vehicle transmission speed sensor of a ground vehicle drivetrain in either cited reference or other references of record. The Examiner's asserted combination does not result in a combination that would be obvious. Rather, an engine control as claimed to inhibit throttle actuator input and enable engine compression braking does not result from the combination. Neither reference defines an engine compression brake as expressly set forth in the claims. Moreover, employing such a brake in addition to inhibiting response to a throttle actuator as claimed does not result from following the teachings of the references. Accordingly, the combination of cited references relied upon by the Examiner fails to provide a proper ground for rejection under 35 U.S.C. § 103.

In view of the foregoing, Applicant respectfully submits that the present application is now in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

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